(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 20 January 2005 (20.01.2005)

PCT

(10) International Publication Number WO 2005/005480 A2

(51) International Patent Classification⁷:

C07K 14/705

(21) International Application Number:

PCT/US2004/015136

(22) International Filing Date: 13 May 2004 (13.05.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/482,992 27 June 2003 (27.06.2003) US 60/554,751 19 March 2004 (19.03.2004) US

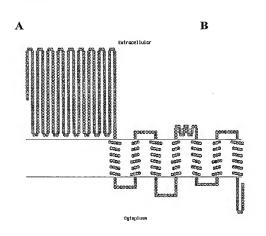
(71) Applicant: MONELL CHEMICAL SENSES CENTER [—/US]; 3500 Market Street, Philadelphia, PA 19104 (US).

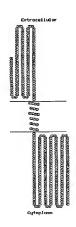
- (71) Applicants and
- (72) Inventors: LI, Xia [CN/US]; 33 Jacalyn Drive, Havertown, PA 19083 (US). LI, Weihua [CN/US]; 44 West Greenhill Road, Broomall, PA 19008 (US). REED, Danielle, R. [US/US]; 520 Bridle Road, Glenside, PA 19038 (US). BACHMANOV, Alexander, A. [RU/US]; 1851 Nestor Street, Apartment B, philadelphia, PA 19115 (US). BRAND, Joseph, G. [US/US]; 706 West Valley Road, Wayne, PA 19087 (US).
- (74) Agents: MULLIN, Barbara, L. et al.; Woodcock Washburn, LLP, One Liberty Place 46th Floor, Philadelphia, PA 19103 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

[Continued on next page]

(54) Title: TASTE RECEPTORS OF THE T1R FAMILY FROM DOMESTIC CAT

Figure 5A Predicted conformation of the 7TM T1R1 protein sequence from cat. Figure 5B Predicted conformation of the cat T1R2 protein sequence.





(57) Abstract: The present invention relates to the discovery of several genes of the domestic cat (*Felis catus*) associated with taste perception. The invention provides, *inter alia*, the nucleotide sequence of the feline *Tasl rl*, *Tasl r2*, and *Tasl r3* receptor genes, the amino acid sequences of the polypeptides encoded thereby, and antibodies to the polypeptides. The present invention also relates to methods for screening for compounds that modify the genes' function or activity, the compounds identified by such screens, and mimetics of the identified compounds. The invention further provides methods for modifying the taste preferences, ingestive responses, or general behavior of a mammal, such as a cat, by administering compounds that affect the function or activity of the gene or the polypeptide encoded thereby.

WO 2005/005480 A2



(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

 without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.